

What is claimed is:

584-81
A polarizing glass comprising geometrically anisotropic particles dispersed in an oriented manner in at least the surface of a glass base body, wherein the glass base body is denoted by the weight percentages of

50-65 percent SiO_2 ,
15-22 percent B_2O_3 ,
0-4 percent Al_2O_3 ,
2-8 percent ZrO_2 ,
6 percent $< \text{Al}_2\text{O}_3 + \text{ZrO}_2 < 12$ percent,
6-16 percent R_2O (where R denotes at least one from among Li, Na, and K),
0-3 percent Li_2O ,
0-9 percent Na_2O ,
4-16 percent K_2O ,
 $\text{Li}_2\text{O} + \text{Na}_2\text{O} < \text{K}_2\text{O}$,
0-7 percent BaO and/or SrO, and
0-3 percent TiO_2 ;
comprises per 100 weight percent of essentially the above composition at least 0.15-1.0 percent Ag and at least the chemical equivalent to Ag of Cl and/or Br; and the geometrically anisotropic silver particles are metallic Ag particles.

2. The polarizing glass according to claim 1 wherein the glass comprises 0.5-5 weight percent BaO.

3. The polarizing glass according to claim 1 wherein the glass comprises 0.002-0.03 weight percent CuO.

4. The polarizing glass according to claim 1 wherein the glass substantially does not comprise CuO and o substantially does not exhibit photochromic characteristics.

5. The polarizing glass according to claim 1 wherein the glass comprises 1-3.5 weight percent Al_2O_3 .

6. The polarizing glass according to claim 1 wherein the glass comprises 4-7 weight percent ZrO_2 .

7. The polarizing glass according to claim 1 wherein the glass comprises 7-10 weight percent Al_2O_3 and ZrO_2 .

8. A process for preparation of a polarizing glass comprising steps of;
heat treating a shaped glass having the composition denoted by the weight percentages of
50-65 percent SiO_2 ,
15-22 percent B_2O_3 ,
0-4 percent Al_2O_3 ,
2-8 percent ZrO_2 ,
6 percent $< \text{Al}_2\text{O}_3 + \text{ZrO}_2 < 12$ percent,
6-16 percent R_2O (where R denotes at least one from among Li, Na, and K),
0-3 percent Li_2O ,
0-9 percent Na_2O ,
4-16 percent K_2O ,
 $\text{Li}_2\text{O} + \text{Na}_2\text{O} < \text{K}_2\text{O}$,
0-7 percent BaO and/or SrO, and
0-3 percent TiO_2 ;
comprising per 100 weight percent of essentially the above composition at least 0.15-1.0 percent Ag and at least the chemical equivalent to Ag of Cl and/or Br to deposit out silver halide particles;
drawing the glass to elongate the silver halide particles in the glass; and
reducing at least part of the elongated silver halide particles in the glass to form geometrically anisotropic silver particles.

9. The process for preparation of claim 8 wherein the shaped glass is polished and/or etched.

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